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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|------------------------|-------------|----------------------|---------------------|------------------|
| 10/816,150 | 04/01/2004 | Ibrahim M. Elfadel | YOR920040001US1 | 9016 |
| 29683 | 7590 | 09/11/2007 | EXAMINER | |
| HARRINGTON & SMITH, PC | | | PATEL, SHAMBHAVI K | |
| 4 RESEARCH DRIVE | | | ART UNIT | PAPER NUMBER |
| SHELTON, CT 06484-6212 | | | 2128 | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | |
|------------------------------|------------------------|---------------------|
| Office Action Summary | Application No. | Applicant(s) |
| | 10/816,150 | ELFADEL, IBRAHIM M. |
| | Examiner | Art Unit |
| | Shambavi Patel | 2128 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 05 June 2007.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-20 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) Notice of Informal Patent Application
- 6) Other: _____.

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DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on **05 June 2007** has been entered.

2. Claims 1-20 are pending.

Response to Arguments

3. In view of Applicant's amendment, the 35 U.S.C. 101 rejection of claims 1-12 and the 35 U.S.C. 103 rejection of claims 1-20 are withdrawn. The Examiner notes that claims 1-12 are currently rejected under 35 U.S.C. and 112 claims 13-20 are currently rejected under 35 U.S.C. 101.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Regarding **claim 1**, the limitation (emphasis added) “an automatic selection process controlled by the processor that selects a macromodel from the set of macromodels to simulate one or more of the electrical transmission lines, the selection of the macromodel being determined by one of comparing a total distortion to an error threshold and comparing a length of the transmission line to a critical length calculated from the parameters” is indefinite. What is being selected? A series of “and” statements follow the phrase “the selection of the macromodel being determined by”. Are both algorithms used?

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. Claims 13-20 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Regarding independent claims 13 an 17:

- i. The Examiner asserts that the current state of the claim language is such that a reasonable interpretation of the claims would not result in any useful, concrete or tangible product. Selecting a macromodel in order to simulate a transmission line does not result in a tangible output. The claims are directed to automatically selecting a macromodel from the set of macromodels to simulate one or more of the electrical transmission lines. This claimed subject matter lacks a practical application of a judicial exception (law of nature, abstract idea, naturally occurring article/phenomenon) since it fails to produce a useful, concrete and tangible result. Specifically, the claimed subject matter does not produce a tangible result because the claimed subject matter fails to produce a result that is limited to having real world value rather than a result that may be interpreted to be abstract in nature as, for example, a thought, a computation, or manipulated data. This produced result, a selected macromodel, remains in the abstract and, thus, fails to achieve the required status of having real world value. All other claims are rejected by virtue of their dependency.
- ii. The claims are directed to “a signal bearing medium tangibly embodying a program of machine-readable instructions executed by a digital processing apparatus...” The Examiner notes that this appears to be directed to functional descriptive material. As per the Interim Guidelines, Functional descriptive material claimed in combination with an appropriate computer readable medium to enable the functionality to be realized is patent eligible subject matter if it is capable of producing a useful, concrete and tangible result when used in the computer system. Compare Warmerdam to In re Lowry 32 USPQ2d 1031 where a memory with a data structure that increased computing efficiency was patentable.

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The specification does not define the term “signal bearing medium.” Thus, the claimed invention may be interpreted as software per se, and would therefore lack the necessary hardware to enable any functionality to be realized.

- iii. The claims are directed to “a signal bearing medium tangibly embodying a program of machine-readable instructions executed by a digital processing apparatus...” The Examiner notes that this does not fall into any of the four statutory categories.

Allowable Subject Matter

6. Claims 1-20 would be allowable if rewritten or amended to overcome the rejections under 35 U.S.C. 101 and 35 U.S.C. 112, 2nd paragraph, set forth in this Office action. The following is an Examiner’s statement of Reasons for Allowance:

Regarding claim 1:

The prior art of record does not teach the terms “total distortion”, “error threshold”, and “critical length” as defined by the Applicant on page 9 of the remarks dated 05 June 2007 (“...equations 3-11 of Applicant’s disclosure”).

Regarding claim 13:

The prior art of record does not teach the terms “total distortion” and “error threshold”, as defined by the Applicant on page 9 of the remarks dated 05 June 2007 (“...equations 3-11 of Applicant’s disclosure”).

Regarding claim 17:

The prior art of record does not teach the terms “total distortion” and “critical length” as defined by the Applicant on page 9 of the remarks dated 05 June 2007 (“...equations 3-11 of Applicant’s disclosure”).

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shambhavi Patel whose telephone number is (571) 272-5877. The examiner can normally be reached on Monday-Friday, 8:00 am – 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kamini Shah can be reached on (571) 272-2279. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

NR
FRED FERRIS
PRIMARY EXAMINER
TECHNOLOGY CENTER 2100